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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:)
SKLAR ET AL.)
SERIAL NUMBER: 09/501,643) Art Unit: 1641
FILED: FEBRUARY 10, 2000)
FOR: FLOW CYTOMETRY FOR HIGH) Examiner: GABEL, G
THROUGHPUT SCREENING)
) Docket No: UNME-0070-1

Director of the U.S. Patent and Trademark Office
Washington, D.C. 20231

DECLARATION OF LARRY SKLAR
Under 37 C.F.R. § 1.32

1. I, Larry Sklar, hereby declare that I am a co-inventor of the subject matter of the above-identified patent application.
2. I hereby declare that I obtained a Bachelor's Degree from the University of Chicago, Faculty of the College and the Division of Physical Sciences, Department of Chemistry in June 1970; obtained a Doctor's degree from Stanford University, Faculty of Humanities and Sciences, Department of Chemistry in September 1976. I have studied at the University of California at Santa Cruz, in the USA, from July 1976 to October 1977. I have studied at the Baylor College of Medicine, in the USA, from October 1977 to October 1999.
3. I hereby declare that I began work for the Department of Pathology, University of New Mexico Health Sciences Center, Albuquerque, NM in 1990 and continue to work there presently. I have been a Full Professor in the university since July 1990), and have obtained a Regents' Professor award in 2000 from UNM.

4. I hereby declare that the experiments conducted in my laboratory indicate that the inner diameter of tubing used in the flow cytometry apparatus of the present invention has a direct bearing on the ability of the flow cytometer to obtain separation of samples.
5. I hereby declare that the experiments conducted in my laboratory indicate that the flow cytometry apparatus of the present invention does not provide adequate separations of the samples if poly vinyl chloride tubing having an inner diameter greater than 0.02 inches is used.
6. I hereby declare that the experiments conducted in my laboratory indicate that integrity of the bubbles used to separate samples is important for proper sample separation in the flow cytometry apparatus of the present invention.
7. I hereby declare that the experiments conducted in my laboratory indicate that the integrity of the bubbles used to separate samples in the flow cytometer of the present invention is compromised when the inner diameter of the tubing is greater than 0.02 inches.
8. I hereby declare that claim 13 of the present application as amended reads "The flow cytometry apparatus of claim 12, wherein said high speed multisample tubing comprises poly vinyl chloride tubing having an inner diameter about 0.01 to about 0.03 inches and a wall thickness of about 0.01 to about 0.03 inches." The experiments conducted in my laboratory indicate that performance of the flow cytometry apparatus improved when the inner tubing diameter was 0.02 inches (508 μ m) or less as compared to 0.03 inches.
9. I hereby declare that experiments conducted in my laboratory suggest that performance of the claimed flow cytometry apparatus continues to improve for tubing having inner diameters at least as small as 0.01 inches (254 μ m) or 0.005 inches (127 μ m).

10. I hereby declare that experiments conducted in my laboratory indicate that performance of the claimed flow cytometry apparatus was better when poly vinyl chloride tubing was used as opposed to using other soft tubing.
11. I hereby declare that experiments conducted in my laboratory indicate that when the flow rate was in the range of 2-3 μ ls/sec, optimal delivery was obtained with tubing having an inner diameter of 0.01 inches (254 μ m).
12. I hereby declare that experiments conducted, under my supervision, on a device according to the presently claimed invention provided near optimal data. In this experiment, a series of samples were separated from each other by air bubbles, in tubing with inner diameter of 0.01 inches (254 μ m). This tubing was located between the peristaltic pump and the flow cytometer.
13. I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issued therefrom.

Declared by: Larry A. Sklar
Larry A. Sklar

Date: June 20, 2001